

## WHAT IS CLAIMED IS:

- 1 1. A computerized method of determining differential promotion allocation  
2 among prospective customers comprising the steps of:  
3 entering management information that is specific to business  
4 management objectives and constraints, including entering budget  
5 information; and  
6 defining a campaign plan for allocating presentations of a  
7 plurality of said promotions among said customers, including using automated  
8 processing to form said campaign plan on the basis of customer segments  
9 and said management information, said customer segments being based  
10 upon customer commonalities with respect to at least one customer attribute,  
11 said campaign plan being defined to include at least one restricted promotion  
12 for which each customer segment is assigned a specific percentage and at  
13 least one specific percentage is less than an entirety of said customer  
14 segment, each said specific percentage representing that portion of said  
15 customers from said customer segment that is to be presented with said  
16 restricted promotion.
- 1 2. The method of claim 1 wherein said step of defining said campaign plan  
2 includes:  
3 automatically identifying an inconsistency in achieving two of  
4 said business management objectives;  
5 automatically determining a guideline for resolving a trade-off  
6 between said two business management objectives; and  
7 utilizing said guideline in configuring said campaign plan.
- 1 3. The method of claim 1 wherein said step of defining said campaign plan  
2 includes:  
3 automatically detecting contradictions between said constraints  
4 and other aspects of said entered management information;  
5 automatically identifying resolutions to said contradictions; and  
6 implementing said resolutions in said campaign plan.

1 4. The method of claim 3 wherein said step of automatically detecting said  
2 contradictions includes generating a report which identifies said contradictions  
3 and said resolutions.

1 5. The method of claim 1 wherein said step of entering said management  
2 information includes entering data indicative of budget constraints (1) for  
3 individual said customer segments and (2) for said overall campaign plan.

1 6. The method of claim 1 wherein said campaign plan is specific to applica-  
2 tion via the global communications network referred to as the Internet.

1 7. The method of claim 1 wherein said campaign plan is specific to applica-  
2 tion via a telecommunications network.

1 8. The method of claim 1 further comprising a step of entering market data  
2 on which said campaign plan is further based, including entering conversion  
3 data that is indicative of the responsiveness of each said customer segment  
4 to said promotions.

1 9. The method of claim 8 wherein said step of entering said market data  
2 includes providing null promotion data for individual said customer segments,  
3 said null promotion data being indicative of probabilities of achieving said  
4 business management objectives during an absence of said promotions.

1 10. The method of claim 1 further comprising a step of entering supply chain  
2 data on which said campaign plan is further based, said supply chain data  
3 being indicative of availability of resources that are subject matter of said  
4 promotions.

1 11. A system for forming a promotion campaign plan comprising:  
2 stored customer segment information indicative of mapping a  
3 plurality of customers to a smaller number of customer segments, said  
4 mapping being based on attributes that are perceived as being relevant to  
5 customer activity when presented with promotions;  
6 stored promotion information regarding a plurality of promotions;  
7 stored market information regarding marketing considerations  
8 relevant to said promotions;  
9 stored management information regarding business objectives  
10 and business constraints relevant to said promotions; and  
11 an optimization engine configured to design a promotion  
12 campaign as an algorithmic response to each of said stored customer  
13 segment information, said stored promotion information, said stored market  
14 information and said stored management information, wherein said promotion  
15 campaign indicates promotion strategies on a promotion-by-promotion and  
16 segment-by-segment basis, said optimization engine being enabled to detect  
17 and automatically address inconsistencies and contradictions in achieving  
18 said business objectives and business constraints.

1 12. The system of claim 11 wherein said stored management information  
2 includes budget constraints for each said customer segment, said  
3 optimization engine being configured to be responsive to said budget  
4 constraints such that said promotion campaign includes designations of  
5 portions of specific said customer segments that are to be presented with  
6 particular said promotions.

1 13. The system of claim 11 wherein said optimization engine is cooperative  
2 with a feasibility engine that is configured to recognize and address said  
3 contradictions in said stored management information, said feasibility engine  
4 being enabled to determine resolutions to said contradictions that involve said  
5 business constraints.

1 14. The system of claim 11 further including stored supply data regarding  
2 availability of either or both of goods and services being offered to said  
3 customers.

1 15. The system of claim 14 wherein said stored supply data indicates on-  
2 hand inventory and currently ordered inventory.

1 16. The system of claim 11 wherein said optimization engine is cooperative  
2 with an efficiency frontier engine that is configured to recognize said  
3 inconsistencies and to determine trade-offs among said business objectives,  
4 said efficiency frontier engine being responsive to a hierarchy of said  
5 business objectives.

1 17. A method of determining differential promotion allocation among website  
2 visitors comprising the automated programming steps of:  
3 entering market data that includes visitor conversion information  
4 and null promotion information, said conversion information being specific to  
5 visitor groups that are based on common attributes among said visitors, said  
6 conversion information identifying group-by-group characteristics relating to  
7 desired website visitor activities, said null promotion information identifying  
8 factors specific to said groups and said desired website visitor activities when  
9 there is an absence of promotions that are designed to promote said website  
10 visitor activities;  
11 entering management data that includes business objectives  
12 and business constraints, said business objectives including information  
13 regarding target numbers of conversions and target revenue and profit levels,  
14 said business constraints including group-by-group budget constraints; and  
15 computing a campaign plan that is specific to each said group  
16 and each said promotion, said campaign plan being based upon said market  
17 and management data.

1 18. The method of claim 17 further comprising entering supply data for use in  
2 said computing step, said supply data being indicative of goods or services  
3 that are offered to said website visitors.

1 19. The method of claim 18 wherein said computing step includes auto-  
2 matically detecting and addressing inconsistencies among said objectives.

1 20. The method of claim 17 wherein said computing step includes  
2 designating percentages for each said group and each said promotion, where  
3 each percentage represents the portion of said website visitors within a  
4 particular said group that will be presented with a particular said promotion,  
5 with at least some of said percentages being less than one hundred percent.